REMARKS

Applicants thank the Examiner for the thorough consideration given the present application.

Claims 5-8 and 11-15 are now present in this application. Claims 5, 11 and 12 are independent. Claims 1-4, 9 and 10 have been canceled, claims 5 and 8 have been amended, and claims 12 to 15 have been added. Reconsideration of this application is respectfully requested.

Rejection Under 35 U.S.C. § 102

Claims 1, 3-8 10 and 11 stand rejected under 35 U.S.C. § 102(b) as being anticipated by US 6,289,680 (Oh et al.). This rejection is respectfully traversed.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

While not conceding the appropriateness of the Examiner's rejection, but merely to advance prosecution of the instant application, Applicants respectfully submit that claim 5 has been amended to recite a combination of elements in an operation control apparatus including a current detecting unit for detecting current applied to the compressor, a voltage detecting unit for detecting voltage applied to the compressor, an operation control apparatus for a compressor including detecting means for detecting a current and a voltage applied to a compressor and a storing means for presetting a standard current value for preventing an overcurrent generated when the compressor initially starts, and storing the set standard current value. A comparing means compares the detected current value and the standard current value, and outputs a comparing signal corresponding to the comparing result. A control means cuts off a current applied to the compressor by turning off a current control means installed at the compressor by the comparing result, or controls a stroke voltage applied to the compressor by turning on/off the current control means at a certain period, and an OLP (over load protector) and/or a PTC thermistor (positive temperature coefficient thermistor) are not used for the operation control apparatus. The control means cuts off a current applied to the compressor by turning off the current control means when the detected current value is greater than the standard current value.

Oh et al. does not disclose a storing means for presetting a standard current value for

preventing an overcurrent generated when the compressor initially starts, and storing the set standard current value. Oh et al. is concerned with instability of the system due to the stroke. The system estimates the stroke and compares it to a preset maximum value. The judgment on stability is transferred to the stroke command determiner 31. The stroke value determiner determines the most adequate stroke command value and transfers it to the stroke controller 33. There is no storing means, as claimed, nor is there a comparing means for comparing the detected current value and the standard current value, and outputting a comparing signal corresponding to the comparing result.

Claim 11 recites a method for controlling an operation of a compressor including detecting a current applied to the compressor and comparing the detected current value and a preset standard current value and cutting off a current applied to the compressor by turning off a current control means installed at the compressor when the detected current value is greater than the standard current value and when the detected current value is the same as or smaller than the standard current value, estimating a stroke of the compressor, and controlling a stroke voltage applied to the compressor by turning on/off the current control means at a certain period on the basis of the estimated value and the preset stroke standard current value.

As mentioned above, Oh et al. does not disclose a step of comparing the detected current value and a preset standard current value and cutting off a current applied to the compressor by turning off a current control means installed at the compressor when the detected current value is greater than the standard current value. Nor does Oh et al. disclose estimating a stroke of the compressor, and controlling a stroke voltage applied to the compressor by turning on/off the current control means at a certain period on the basis of the estimated value and the preset stroke standard current value when the detected current value is the same as or smaller than the standard current value. Oh et al. detects whether the system is stable or unstable and sends the judgment to the stroke command determiner which, in turn, sends the stroke command value to the stroke controller 33 which also received input from the sensorless stroke estimator.

Applicants respectfully submit that the combinations of elements and steps as set forth in independent claims 5 and 11 are not disclosed or made obvious by the prior art of record, including Oh et al., for the reasons explained above. Accordingly, reconsideration and withdrawal of this

rejection are respectfully requested.

With regard to dependent claims 6-8, Applicants submit that these claims depend from independent claim 5 which is allowable for the reasons set forth above, and therefore claims 6-8 are allowable. In addition, these claims recite further limitations which are not disclosed or made obvious by the applied prior art references. Reconsideration and allowance thereof are respectfully requested.

New Claims

Claims 12-15 have been added for the Examiner's consideration. Independent claim 12 recites a combination of elements in an operation control apparatus for a reciprocating compressor without including an Over Load Protector and/or a Positive Temperature Coefficient thermistor, the operation control apparatus comprising: a voltage detecting unit for detecting applied to an interior motor of the reciprocating compressor when the reciprocating compressor is operated; a current detecting unit for detecting applied to the interior motor of the reciprocating compressor when the reciprocating compressor is operated; a stroke estimating unit for estimating a stroke of the compressor on the basis of a voltage value detected from the voltage detecting unit, a current value detected from the current detecting unit, and a motor constant of the interior motor of the reciprocating compressor; a standard current value storing unit for storing a preset standard current value to cut off an overcurrent generated when the compressor initially starts; a comparing unit for comparing the current value detected from the current detecting unit and the standard current value previously stored at the standard current value storing unit, and outputting a comparing signal corresponding to the comparing result; a control unit for generating a cut-off signal for cutting off a current applied to the interior motor of the reciprocating compressor on the basis of the comparing signal, or comparing the estimated stroke value and the stroke reference value, and then generating a control signal on the basis of the comparing result; and a power supply unit including a current control device, and for cutting off a current or controlling a stroke voltage applied to the interior motor of the reciprocating compressor, wherein the current control device cuts off a current applied to the interior motor of the reciprocating compressor based on the cut-off signal, and varies a stroke voltage applied to

the interior motor of the reciprocating compressor based on the control signal generated from the control unit.

Applicants respectfully submit that this combination of elements as set forth in independent claim 12 is not disclosed or made obvious by the prior art of record. New claims 13-15 depend from claim 12 and are therefore allowable.

Consideration and allowance of claims 12-15 are respectfully requested.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Chris McDonald, Registration No. 41,533, at (703) 205-8000, in the Washington, D.C. area.

Prompt and favorable consideration of this Amendment is respectfully requested.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By _____
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